

Sub EJ
P 1 where the memory address matches one of the decompressed defective memory addresses, extracting the substitute address associated therewith; and

accessing a memory location corresponding to the extracted substitute address rather than a memory location corresponding to the memory address.

Sub EJ
P 2 45. (Once amended) A method for accessing a memory device receiving memory addresses, the method comprising:

comparing the received memory addresses to decompressed addresses of defective memory locations in the memory device, the decompressed addresses of the defective memory locations otherwise stored in a compressed format having associated therewith substitute addresses corresponding to substitute memory locations in another memory; and

substituting for the memory addresses matching the decompressed addresses of defective memory locations the associated substitute memory addresses to access the substitute memory locations in the other memory.

P J 46. (Once amended) The method of claim 45 wherein the decompressed addresses of defective memory locations in the memory device are stored in a compressed format and wherein comparing the received memory addresses comprises decompressing at least one of the stored addresses of defective memory locations, and comparing a received memory address to the decompressed address.

47. (Once amended) The method of claim 45 wherein the decompressed addresses of defective memory locations in the memory device are stored in a compressed format and wherein comparing the received memory addresses comprises:

decompressing a portion of at least one of the stored addresses of defective memory locations;

calculating a value from a received memory address; and
comparing the calculated value to the decompressed portion.

SAC
59. (Once amended) A method of remapping defective memory locations of a primary memory, the method comprising:

identifying memory addresses of the defective memory locations in the primary memory;

mapping the identified memory addresses of the primary memory to substitute memory addresses that correspond to substitute memory locations in a spare memory;

storing the identified memory addresses of the primary memory and the substitute memory addresses of the spare memory; and

in response to a request to access a defective memory location in the primary memory, substituting the associated substitute memory address in the spare memory for the memory address corresponding to the requested defective memory location in the primary memory.

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60. (Once amended) The method of claim 59 wherein the primary memory having the defective memory locations comprises a first memory device and the spare memory comprises a second memory device.

61. (Once amended) The method of claim 59 wherein identifying the defective memory locations comprises testing all of the memory locations of the primary memory prior to accepting a first memory access request.

62. (Once amended) The method of claim 59, further comprising compressing the defective memory addresses and the substitute addresses prior to storing.